



12EL6

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TWIN DIODE—HIGH-MU TRIODE

7-PIN MINIATURE TYPE

*For use in automobile radio receivers operating directly
from 6-cell storage-battery systems*

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage range (DC). 10 to 15.9 volts

This voltage range is on an absolute basis. For longest life, it is recommended that the heater be operated within the voltage range of 11 to 14 volts.

Current (Approx.)

at 12.6 volts 0.15 amp

Direct Interelectrode Capacitances

(Approx.):⁰

Triode grid to triode plate 1.8 μ f

Triode grid to cathode and heater 2.2 μ f

Triode plate to cathode and heater. 1 μ f

Diode-No.1 plate to diode-No.2 plate. 1 μ f

Characteristics, Class A₁ Amplifier (Triode Unit):

Heater Voltage. 12.6 volts

Plate Voltage 12.6 volts

Grid Voltage. 0 volts

Amplification Factor. 55

Plate Resistance (Approx.). 45000 ohms

Transconductance. 1200 μ mhos

Plate Current 750 μ a

Mechanical:

Operating Position. Any

Maximum Overall Length. 2-1/8"

Maximum Seated Length 1-7/8"

Length, Base Seat to Bulb Top (Excluding tip). . . 1-1/2" \pm 3/32"

Diameter. 0.650" to 0.750"

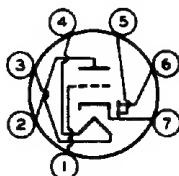
Dimensional Outline See General Section

Bulb. T5-1/2

Base. Small-Button Miniature 7-Pin (JEDEC No.E7-1)

Basing Designation for BOTTOM VIEW. 7FB

Pin 1—Triode Grid
Pin 2—Triode Plate
Pin 3—Heater
Pin 4—Heater



Pin 5—Diode-No.2
Plate
Pin 6—Diode-No.1
Plate
Pin 7—Cathode

TRIODE UNIT — AMPLIFIER — Class A₁

Maximum Ratings, Design-Center Values:

PLATE VOLTAGE 30 max. volts

CATHODE CURRENT 20 max. ma

⁰ without external shield.

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TWIN DIODE—HIGH-MU TRIODE**PEAK HEATER-CATHODE VOLTAGE:**

Heater negative with respect to cathode. . . 30 max. volts
 Heater positive with respect to cathode. . . 30 max. volts

Typical Operation:*As resistance-coupled amplifier*

Heater Voltage	12.6	volts
Plate Supply Voltage	12.6	volts
Grid Voltage	0	volts
Plate Load Resistor.	1	megohm
Grid Resistor.	1	megohm
Grid Resistor of Following Stage	2	megohms
Input Capacitor.	0.02	μ f
Output Capacitor	0.01	μ f
Voltage Gain at 400 cps with RMS output volts = 1.	16	

Maximum Circuit Values:

Grid-Circuit Resistance. 10 max. megohms

DIODE UNITS — Two*Values are for Each Unit***Maximum Ratings, Design-Center Values:**

PLATE CURRENT. 1 max. ma
PEAK HEATER-CATHODE VOLTAGE:
 Heater negative with respect to cathode. . 30 max. volts
 Heater positive with respect to cathode. . 30 max. volts

Characteristics:

Heater Voltage 12.6 volts
 Plate Current for plate volts = 10 2 ma